# MULTI-CHANNEL NON-INVASIVE TISSUE OXIMETER

## ABSTRACT OF THE DISCLOSURE

A method and apparatus for spectrophotometric in vivo monitoring of blood metabolites such as hemoglobin oxygen concentration at a plurality of different areas or regions on the same organ or test site on an ongoing basis, by applying a plurality of spectrophotometric sensors to a test subject at each of a corresponding plurality of testing sites and coupling each such sensor to a control and processing station, operating each of said sensors to spectrophotometrically irradiate a particular region within the test subject; detecting and receiving the light energy resulting from said spectrophotometric irradiation for each such region and conveying corresponding signals to said control and processing station, analyzing said conveyed signals to determine preselected blood metabolite data, and visually displaying the data so determined for each of a plurality of said areas or regions in a comparative manner.